

# Inside SPACE

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*In this issue...*

*Hearings . . . Off And Running*

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## HEARINGS ... OFF AND RUNNING

As we go to press on this issue of **Inside SPACE**, five of the most important days in the history of the home satellite earth station industry are about to occur. These are the days that Congressman Timothy Wirth has scheduled for hearings on the important issue of scrambling and access to satellite programming by home satellite earth station owners.

Attached to this week's issue of **Inside SPACE** is a list of those who are scheduled to testify before the Subcommittee.

As you may see, the list includes both **SPACE** and earth station representatives as well as representatives of the major networks, broadcast stations, the NCTA, M/A-Com, HBO, Showtime, and others.

The light which is shining on the practices of the cable television industry we think will reveal significant anticompetitive behavior. Also attached to this issue of **Inside SPACE** is a copy of the testimony of **SPACE** Chairman Taylor Howard as well as that of General Counsel Richard L. Brown.

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## PROPOSED WITNESS LIST

Start: 9:30 AM  
2123 Rayburn HOB

A. Members of Congress

Congressman Charlie Rose  
Congressman Judd Gregg  
Congressman Mac Sweeney

B. Demonstration of satellite earth station equipment with Congressman W.J. "Billy" Tauzin.

Panel 1 - focus on access of viewers to signals. (Five minute summary of testimony by each panelist)

1.	Jim Mooney	NCTA
2.	Bob Redmon	Astro
3.	?	CBS
4.	?	Affiliate
5.	Ed Taylor	Southern Satellite Systems
6.	Rick Brown	SPACE

Panel 2 - focus on distribution (wholesale and retail) of viewing rights and decoders. (Five minute summary of testimony by each panelist)

1.	Taylor Howard	Chaparral
2.	John Sie	TCI
3.	Michael Fuchs	HBO
4.	Jim Bunker	M/A-COM
5.	Steve Roberts	Viewers First
6.	Ron Lightstone	Viacom

**TESTIMONY OF TAYLOR HOWARD BEFORE THE SUBCOMMITTEE ON  
TELECOMMUNICATIONS, CONSUMER PROTECTION & FINANCE, ENERGY  
AND COMMERCE COMMITTEE**

**March 6, 1986**

**CHAPARRAL COMMUNICATIONS, INC.  
2360 Bering Drive  
San Jose, California 95131**

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**TESTIMONY OF TAYLOR HOWARD BEFORE THE SUBCOMMITTEE ON  
TELECOMMUNICATIONS, CONSUMER PROTECTION & FINANCE, ENERGY  
AND COMMERCE COMMITTEE**

**March 6, 1986**

Mr. Chairman, Members of the Subcommittee and staff, I am pleased to be here today to provide testimony on a topic which is of great importance to the American television viewing public. I am chairman of the Board of Directors of SPACE, the Satellite Television Industry Association, and was a founding director and its first president in 1980. I am also a founder of Chaparral Communications, Inc., one of the largest suppliers of components to the satellite earth station industry and a leading supplier of receivers. Prior to my involvement in the satellite earth station industry, I was a research professor of electrical engineering at Stanford University and I am now professor emeritus. I have been involved as a principal investigator for NASA in the Apollo, Mariner and Pioneer programs, as well as in the forthcoming Galileo Mission to Jupiter. In 1976 I received NASA's medal for exceptional scientific achievement.

**INTRODUCTION**

In 1976, I constructed my own home satellite earth station. It was a 15 footer and it still works today. Since then, through American entrepreneurs and innovation, close to two million American - - nearly six million people - - families have come to enjoy the benefits of low cost home satellite television. In 1976 I did not dream that so many millions of Americans would come to enjoy, on such a personal level, the achievements of space age technology at such an early date. And now that they have, we should encourage robust development of this technology and the benefits that it provides. That is why I ask for your immediate consideration of the issues that we are bringing before you today.

Our industry and all Americans who benefit from home satellite technology are deeply appreciative of the urgent attention that this Subcommittee, under the guidance of its chairman and with the hard work of its staff, gave to reaching a compromise last year which, with the assistance of Congressmen W.J. "Billy" Tauzin, Albert Gore and



Henry Waxman, put into law the present Section 705(b) of the Communications Act. This section clarified the right of home earth station consumers to utilize satellite earth stations to view unscrambled signals. It is a prime example of what government can do to assure the best public use of technological advances.

### Anti-Earth Station Campaign

As you all know, there is much unfinished business from last year and the need to address it has now become critical. Our industry has been hurt from the onslaught of scrambling and the negative press being generated by the cable industry. Ads depicting earth stations as bird baths, or stating that they are ugly or useless have caused sales to diminish by 60%-80% around the country. Several manufacturers, distributors and dealers have closed their doors. Thousands of jobs in this industry are threatened nationwide. There has been no orderly transition toward scrambling. The deliverer of these negative messages to the public -- the cable industry -- now wants to control the delivery of scrambled programming to consumers. We feel great discomfort with this concept.

### Marketing Plans for Unscrambled Signals

As you may recall, the 1984 compromise dealt only with the issue of access to unscrambled signals. The manufacture, distribution, retail sale and use of home satellite earth station equipment was clarified as legal for programming that was not encrypted or scrambled. Before discussing scrambling, I would like to discuss a provision in the legislation providing that marketing plans could be developed by programmers for selling unscrambled programming to earth station consumers. Since 1980 the earth station industry has made it clear to this Subcommittee that it is ready and willing to pay fair compensation to program suppliers. We were asked to stand by this commitment, in the 1984 legislation, hence the provision on marketing unscrambled signals. We asked that the legislative history reflect (and it did so), that any marketing programs for

unencrypted signals would have to be developed pursuant to a marketplace negotiation, so that such plans would not be unilaterally imposed on the public.

Nevertheless, in 1985, a few programming services attempted unilaterally to impose marketing plans upon earth station consumers. For example, ESPN and others stated on television screens across the country that viewing unencrypted signals was illegal unless payment was made; and they demanded payments up to 1,000% higher than what the services charged cable systems for their programming. We resisted these payments, because these plans were not negotiated according to our understanding of the compromise reached in the 1984 legislation. In fact, several of the authors of the Cable Communications Policy Act, including Senators Goldwater and Gore and Congressman Tauzin, have expressed in public forums, including the floors of Congress, that the payments being demanded were illegal. While we have no problem whatsoever with the concept of negotiating some form of payment for unscrambled signals, it is a ridiculous notion to assume that program suppliers could unilaterally impose what amounted to a viewing tax on the American public. And although the networks that were seeking to impose such a viewing tax are no longer doing so, it would be well for the Congress to safeguard future generations of viewers by making it clear in the statute itself, that such a payment can only be imposed through a marketplace negotiation with those that would actually pay the bill or through marketplace representatives such as, e.g., manufacturers, distributors and retailers on behalf of their consumers.

Another matter of unfinished business is that of access to programming which is being discussed in other testimony and I will not repeat it here. Two remaining issues concerning program distribution and encryption.

## **PROGRAM DISTRIBUTION**

### **Rush to Scramble**

We have made it clear since 1981 that scrambling of programming was one way to ensure payment (particularly for pay television services), but before programming became scrambled, there should be a right of access to it as well as a mechanism to



ensure reasonable prices. Therefore, we are grateful for the three bills before the House on this issue H.R. 1769, H.R. 1840 and H.R. 3989, and for the numerous co-sponsors. We find most, if not all, of the provisions in them helpful in trying to solve the problems. We promise to continue to work with the sponsors, co-sponsors, the Subcommittee and the other interested parties in order to reach an equitable legislative solution.

We agree and full-heartedly support the concept that pricing is a marketplace concern and that if there were indeed a competitive pricing structure, we would not be here before you this day on this issue. But, the cable industry, fresh on the heels of their deregulation victory, decided to tackle the one vigorous marketplace competitor within their franchised areas, satellite earth stations.

In May, TCI, the nation's largest cable operator, proposed the formation of a cable industry sponsored cooperative to provide an orderly transition to scramble all "cable programming." TCI's paper talked about the need to protect the "integrity of the product" within the franchised cable area. The TCI talking paper does say that rights will be nonexclusive, but these are good words with little substance. The paper asks who should distribute programming to the earth station user and it states that, "the cable operator should be the programming distributors for TVRO within their franchised areas and in nearby unfranchised areas." This is the birth of the "cable friendly" approach, i.e., distribution all the way through cable. The report also states that "we believe that we have all the middlemen we need in this business. Another middleman would be more costly, cumbersome and ultimately confusing and frustrating to the TVRO owners." TCI has had its way. The fact is that today we do have de facto exclusivity for cable.

The NCTA commissioned a study, prepared by Malarkey-Taylor Associates, on the economic impact of scrambling on cable operators, to be released in conjunction with their 1985 convention and scheduled meetings to discuss the report and this issue. The report concluded that the value of scrambling is an increase of \$1.7 billion in the valuation of cable systems because of the prevention of defections from cable to earth stations. The report talks in terms of "salvaged" subscribers. The report suggests that

cable operators sell the programming to home earth station owners and presents models with pricing structures from \$16.00-\$26.00 per household. Essentially, this report was a scare piece to let the cable industry know that earth station competition could erode cable industry balance sheets.

Just prior to the 1985 NCTA convention, the treasurer of the NCTA who is an officer of Heritage Communications (a cable MSO) stated that his company was writing every programmer and the letter would be "a very strong letter." He continued,

It will not state that we will stop paying them on such and such a date. We are going to be on record with every one of the program vendors formally that we consider this a top priority and what the next step is I am not sure. . . but the purpose of this activity is to put us on record with these people, that we feel it is essential that they take action to scramble their services now. Cablevision, June 3, 1985 at p. 121.

I should further note that Heritage Communications is engaging to this very date in one of the most vigorous anti-earth station smear campaigns in the industry.

In the same interview, the chairman of NCTA discussed Ted Turner's new four-year rate schedule for cable. He pointed out to Turner that:

. . . this is going to go over like a lead balloon with all the problems we have right now unless there is a positive statement as to their intent to scramble. When they [CNN] ultimately sent out their letter [on their new rates], there was a sentence in it that says that CNN plans to take the lead on scrambling of advertiser-supported services. I tend to count scalps on the wall. Cablevision, Id. at 122.

Also prior to the NCTA convention, the chairman of ATC, the nation's second largest cable company which is owned by Time, Inc. (which also owns HBO) said he was prepared to drop, from all ATC systems, any service that declined to scramble its signal. Multichannel News, May 27, 1985. The call went out at NCTA and CATA conventions, that all programmers must scramble their signals. The chief executive officers of the largest cable companies stated that unless program networks scrambled their signals, these cable operators would disenfranchise those networks by kicking them off their systems. For major cable operators to take such action would likely result in economic death for almost any program network. Another executive stated, ". . . as we delay it [scrambling] the cancer continues to grow."



Acting on this growing frenzy over earth station growth, the NCTA decided, at its 1985 convention, to explore the formation of a cooperative to bring about scrambling. The chairman of NCTA is quoted as saying that, "NCTA will adopt a proposal which would 'minimize the damage' from a lawsuit." Cablevision, June 10, 1985.

Shortly after this, the NCTA proposed a consortium to distribute programming to the satellite earth station industry. We sought to enter these deliberations but were turned away by NCTA in no uncertain terms. And then CATA commenced a "public relations campaign" which has turned into one of the most vicious anti-anything campaigns in American business history.

Later, in apparent self defense, a consortium of basic programmers was formed to combat the power of the NCTA consortium. This was apparently stopped single-handedly by TCI. The Wall Street Journal reported on February 11, 1986:

By far the most telling example of Tele-communications' clout came last fall, when Showtime, ESPN and Turner attempted to put together a consortium to sell program services directly to owners of backyard satellite dishes. This infuriated Tele-communications executives, who wanted to sell such a service to dish owners who lived in or near areas where Tele-communications operates but who were outside its service area. In the longer term, Tele-communications and other cable operators fear that once new high-powered satellites are in place after 1990, programmers will bypass cable altogether to sell services to consumers with small rooftop dishes.

Because ESPN, Showtime and CNN depend on Tele-Communications systems for a substantial number of their own subscribers, the company convinced them that it wouldn't be in their best interests to start a programming service. 'We expressed a certain amount of displeasure,' Mr. Malone says. 'We were concerned that they not go off and think we would continue to promote and carry and pay for their services on cable while they were going around us with a competitive technology.'

Late last summer the Department of Justice stated that it had opened an inquiry into the practices of cable companies and programmers vis-a-vis scrambling and program distribution, which investigation is still ongoing. Thereafter, several programmers announced their intention to scramble and use the M/A-COM system and the NCTA consortium was temporarily folded.



Is it any wonder that we do not want to turn over our industry to cable operators? The point is very clear. Cable operators want to eliminate competition from home earth stations and are trying to control distribution to home earth station consumers. Further, they have no regard or concern for the millions of homes beyond profitable range.

### Programmers

Our position with respect to programmers, especially the cable networks that are largely supported by advertising or by viewer contributions, is that they should feel free to serve the rapidly expanding earth station market in an unscrambled mode in order to maximize their viewing audiences. We have publicly encouraged these services not to succumb to the anticompetitive posture of the cable industry advocates that are attempting to force them to scramble by threatening to drop their services. Most of them have succumbed. What real interest do religious and largely advertiser-supported services have in scrambling? We set out, in full, a letter from Pat Robertson, President of the Christian Broadcasting Network (CBN), to Channel Guide magazine which states:

## Letters To The Editor\_\_\_\_\_

### **Knowing Where Your Bread Is Buttered**

*To the editor:*

We have been struggling to keep free of scrambling our signal for over a year. There are about one million households with private satellite dishes and thousands of others are being added every month.

The pay television operators, such as HBO, regard the free viewing of their service as a form of piracy. The cable operators obviously view this as a danger to the billions of dollars they have invested in land lines, etc. There are about 40 million cable households now and the growth of cable is clearly outstripping the predominately rural home satellite dishes.

So far the DBS concept has not worked out economically and none of the serious players are at present going with it. With dozens of new program services clamoring for cable access, we

are at a point where it does not seem prudent to jeopardize 40 million households in order to preserve access to one million households which may indeed be denied service under any circumstances by the other major program suppliers.

It has been the consensus of our executives that the growth and strength of the CBN Cable Network has been the result of the obvious blessing and favor of the Lord, but secondly the carriage of our signals by the total cable industry including the very large multiple system operators throughout the country. Our service has been good for them, but their cooperation has been good for us, despite our strong feeling about open skies and free access. It doesn't make sense at this time to turn our backs on those who over the last eight years have been providing us access to the homes of millions

*Pat Robertson,  
President, CBN Cable Network*

In summary, programmers should have freedom of choice. We know that some of them have dual income streams (advertising and subscriptions) and that it may be in their economic interest to scramble and sell their programming, but this decision cannot and should not be forced upon them.

With respect to pay television programmers they should be paid for their efforts, for without payment they would not exist. With respect to the consumers for all these services, they should pay reasonable prices. We believe this must come about through a competitive, free enterprise distribution system that is not in the exclusive control of anyone. Marketing through cable alone or through cable and the program network itself simply will not do. In too many cases the program network is a cable operator and in others the network is so highly influenced by the live-or-die power of the large MSOs that they are not truly independent. We need independent distribution by networks selling at wholesale to earth station retailers or to independent-of-cable distributors or packagers.

We believe that the cable operators do have a place in the marketing of programming to satellite earth stations. We see no reason why cable operators cannot purchase earth station equipment, sell it and programming as well, both within and outside their service areas. We see no reason why they cannot sell programming without selling equipment. But we do not think cable should be the only local distributor of programming. They have not only asked the programmers to scramble, they have insisted upon it and they have asked the programmers to be cable friendly. I would like to look at two examples of being "cable friendly."

The HBO plan calls for cable operators to sell the HBO programming. The operators are permitted to sell within their franchised areas but not outside of their franchised areas. This precludes price competition between cable operators inside and outside of franchised areas. Rural subscribers living outside the franchised area have to call HBO and pay \$12.95, which is some 29% above last year's national retail average

price for HBO which an independent survey found to be \$10.05. Rural customers are thus paying a whopping subsidy to keep urban and suburban cable rates down. The presence of independent middlemen that could buy from HBO at approximately the cable wholesale rate would inevitably reduce to reasonableness the consumer price in rural areas.

In cabled areas, the notion that HBO, selling through an 800 number, is competing directly with the cable operator is a myth. First, HBO refers all calls in cable areas to the local cable company. Even if the earth station customer chooses not to deal with the local cable operator, HBO will service the consumer at list price but will credit the cable operator for such consumers. Second, HBO has priced its programming high enough that cable operators can sell within their franchised areas at a high price that will deter earth station sales. The perceived value of an earth station is in the diversity of programming opportunities and affordable price. A consumer that pays for his or her own plant, as it were, also wants programming at a reasonable price. As long as HBO maintains a high price for direct sales, the cable operator can charge essentially as much as desired (under the HBO price) in the franchised area. This will deter earth station sales.

It is difficult for HBO to be perceived as earth station friendly. Many consumers buy earth stations because they are dissatisfied with cable operators and limited choice. In fact, in HBO's manual, HBO states "... the overwhelming majority of TVRO owners in wired areas are former cable subscribers. Dissatisfaction with local cable service is most often cited by these customers as a motivation for dish purchase. Other reasons include a more favorable price/value, comparison of TVRO ownership to cable service and the optimum number of available premium services." It is difficult for consumers who are dissatisfied with cable to have to buy programming from cable. Sales would expectedly be greater from this category of consumers if they could deal with another entity other than cable, e.g., the earth station retailer.

HBO is not aggressively pursuing earth station consumers. HBO's cable manual for its "HBO C-Band Direct Broadcast Program" is dated 1986 and appears to have been mailed to cable operators only shortly before full time scrambling. Therefore, most



cable operators were, and still are, unprepared to sell programming to the home earth station market.

Furthermore, HBO will not permit satellite earth station retailers to demonstrate the decoded signal of HBO services in their showrooms. This, of course, deters earth station sales.

It appears to our industry that HBO as a sister company to ATC, the second largest cable operator, and the largest supplier of pay television to the cable industry at large, is indeed being cable friendly. We believe they should be mandated to start an independent-of-cable pipeline to the earth station consumer. These kinds of practices described should be curtailed by legislation, for if others follow suit, there will be no earth station industry to compete with cable.

Another example is that of a major basic service which sells to cable at 18¢ or less per month, per cable subscriber. But this network is charging \$1.00, a 500% increase, when cable wants to sell to earth station consumers. While this network may desire more money to retain positive earnings, it certainly would be more appropriate to spread this among all subscribers, including cable. Under the above pricing plan, earth station consumers that purchase their own plant will be subsidizing cable companies and their consumers. We believe that cable companies are not protesting these high charges for two reasons. First, by paying higher fees, cable operators can justify high charges to earth station consumers and therefore make earth stations an unattractive competitor in franchised areas. Second, by acquiescing to these high fees, cable sets a high floor for any independent-of-cable distributor that might obtain distribution rights. This would cause the prices to consumers from such a distributor to rise to the cable rate, making the would-be competitor, in fact, non-competitive. It is hard to imagine that the large MSOs, that seem to use their economic leverage so well with programmers, could not have bargained harder on this issue. The only safe conclusion is that there are no meaningful negotiations going on.

In summary, a competitive marketplace for the distribution of programming is not developing. We believe that without competition consumers will be denied fair pricing and the benefits of satellite earth stations will be curtailed or even eliminated.

### ENCRYPTION

The issue of decoding is not a new one to us. As early as 1981, SPACE's testimony before this Subcommittee stated that scrambling was one alternative mechanism for ensuring payment to programmers, particularly pay television programmers. So it is not the question of scrambling per se with which there is a quarrel. Motion picture studios have made it clear to the cable television operators and to the pay television networks that the theft of service with respect to feature films is intolerable. We understand and agree with this. The overwhelming majority of this theft of service, however, is along cable television lines. Yes, there is theft of service by some SMATV's that take the service without paying for it, as well as by some cable systems. But, the billion dollar a year problem of theft of service along the cable lines, which is estimated to be some five million illegal "subscribers," is not going to be cured by scrambling of programming on the satellite. This is because the decoding will occur at the cable television headend. It is beyond the cable headend that the theft of service occurs. What we ought to be working toward is a universal scrambling system that will allow for every television set in America to receive scrambled signals on a uniform basis. With a decoder associated with every television set, we would end theft of service and the nearly one billion dollar per year problem that it is causing. The benefits of a universal decoding system would also redound to the consumer who, over the long run, would pay less for decoding systems because of the large number of them that would be produced. With universal decoding, consumers should also pay less for programming in the long run because of the absence of theft of service. That is, there will be greater revenues to the cable industry, the program distributors and producers, thus containing the pressure for rate increases.

But this is not the direction in which we are heading. My observations are that the decoder which is being touted as a de facto cable standard, does not work in a manner

that would allow for individual decoding in the home of a cable television subscriber. It has been said that cable operators want it that way, otherwise there will be too much power in the hands of the satellite television networks. Decoding at the television set might make cable television systems into common carriers. It is argued that cable would merely deliver the signal down the line to the cable subscriber who would in turn become a customer of the programmer. I understand the radicalism of that notion and the fear it must strike in cable operator's hearts, as does the thought that the dish owner would be able to deal direct. I think the Congress could look at this in the context of the legislation before it and take steps to ensure that cable would remain a non-common carrier.

Again, the benefits of scrambling to every cable customer would be that instead of a relatively small number of decoders to serve the present two million earth stations, there would be an immediate market for some 35-40 million decoders. This would certainly bring the price down to a reasonable level and again, it will eliminate the real theft of service problem.

In order to accomplish this goal, there should be national standards set by the Congress or an expert body, such as the FCC, with input from the various industries that would be affected. The emerging de facto decoding system has come about, in large part, by the fact that HBO has chosen the M/A-COM system and that the cable operators, in the last several months, have vigorously encouraged programmers to scramble their signals as soon as possible at the risk of being cut-off from their cable systems. Consequently, there has been a rush to the M/A-COM system, irrespective of the merits of that system. But being first does not mean being right.

What is being created here is a proprietary monopoly for M/A-COM. Yes, they have invested millions of dollars in development and yes, those that pursue economic activity deserve a reward. However, the American consumer would be much better served with a variety of manufacturers building equipment according to standard specifications as exist, for example, for color television. In that way the consumer will



benefit from low prices and uniform quality of service. In fact, color television is a good example. The Australians are fond of telling me that "you did it first, but we did it right."

What I am saying is that we, the home earth station industry, are the guinea pigs for a system that may not be the ultimate or proper universal system for the universal decoding I described earlier. By this I do not mean to say that the many features of the M/A-COM system are inappropriate. An engineer may view these as sophisticated. Some typical family users may find them overly complex, others will not. My point is that there is no real competition in encryption as long as cable is in the driver's seat and therefore, we might have M/A-COM for better or worse. It should be noted that there are at least three other standards in use and five available for satellite programming. It looks like cable is protecting itself from satellite with no thought being given to where the communications industry should be 5-10 years from now!

Let us look at what cable's panic has brought to the market.

#### Add-On Decoders for Existing Earth Station Owners

The suggested list price for a decoder is \$395. This descrambler is being sold to distributors at \$325 and the distributors and retailers are supposed to make their profit on the remaining \$70. These prices do not include freight from M/A-COM to the distributor and from the distributor to the dealer. In effect, there are hardly any worthwhile margins available for distributors and dealers and therefore, there is little incentive to sell decoders. Now I am not arguing for higher decoder prices, but I am asking you to consider the overall distribution process created by M/A-COM.

Instead of making these decoders available to all distributors and dealers, M/A-COM is making them available only to cable television operators and M/A-COM distributors, thereby restricting their ultimate distribution.

M/A-COM distributors, at least initially, made the decoders available only to dealers that carried the M/A-COM line. Further, few decoders were available at

distributors on January 15, 1986, the day HBO scrambled. Few, if any were in the stores of retailers. While there may be over supply now, the record does not speak well when demand resumes.

Further, when M/A-COM sent the first shipments of set top decoders, they did so with two different models. Very few, if any, in the industry knew that there would be two different models of the set top decoders, and that one model would be more readily usable with some earth station receivers while the other was usable with different receivers. In late November, M/A-COM notified its distributors that the first units will be available "for use with a limited number of base band receivers only." M/A-COM furnished a list to its distributors of some receivers that were deemed compatible and warned distributors to tell dealers "not to let consumers test VideoCipher II capability with any receivers not on this list." That was the 2000EB model. The 2000E model interfaces with all receivers and contains what is called the 70 mHz IF, which in essence, can best be described as containing a redundant mini-receiver within the descrambler. This is a more expensive item, yet both the 2000EB and the 2000E are being sold at the same price. All of this created widespread confusion in the marketplace.

A random survey of cable companies in Texas conducted by SRC Industries revealed that out of 19 cable systems surveyed and asked whether they sell decoders, 19 said no and none said yes. Fourteen said that they did not have a price or would not sell HBO or Cinemax and 5 said that the price would be between \$12 for one service and \$19 for both. In a similar survey of 45 cable systems in Idaho, Oregon and Texas, 36 said that they did not sell decoders and 9 said that they would or might. None had any in stock and 28 did not have a price for HBO and Cinemax, 17 did have a price in the range of \$9.50-\$19.95. All of these surveys were made in late January and early February.

With respect to the manufacturing of these set-top decoders for the existing market, M/A-COM will not license or permit any receiver manufacturer to manufacture the set-top decoders except, as I understand it, on a limited basis so that the decoders are compatible only with the satellite earth station receiver manufactured by the

company that wishes to produce the set top decoder. In other words, if my company wanted to manufacture set-top decoders, I could not make them from scratch. I would have to buy printed circuit (PC) boards from M/A-COM and then could only make them interface with the receivers that my company manufactures and nobody else's receivers. Thus there can be no competition created to the \$395 price set by M/A-COM.

#### Integrated Receiver/Decoders

With respect to future consumers that our industry is trying to serve, M/A-COM has offered to allow receiver manufacturers to buy a board that is approximately 8" X 10" in size that can be used by manufacturers, such as my company, to be included in the receiver. This board would cost \$150 from M/A-COM. The problem with the board is that it is so large and consumes so much power that it is really a matter of designing a receiver to fit the board. It would be similar to having Libby Owens Ford design a new oversized windshield and tell all car manufacturers to redesign their cars. To the best of my knowledge, only one or two receiver manufacturers have agreed to build this board into their receivers. The bottom line is that for decoders to be commercially acceptable in the long run they must be integrated into satellite television receivers. Further, if there are multiple standards having some degree of compatability, the decoder chip sets must be small enough to allow each satellite television receiver to accommodate as many as needed.

Getting back to the PC board, M/A-COM is also willing to license others to manufacture this PC board so there will be "competition" to M/A-COM. But the license fee is \$1 million up front plus a percentage of the income from all board's manufactured in the future. It is my understanding that only one manufacturer has agreed to these licensing terms. The marketplace is saying that the terms are onerous for a small industry such as ours, composed of many relatively small manufacturers. It is my opinion that several earth station receiver manufacturers would be willing to try to make the



price of the boards come down and hence the cost of decoding, if the up front licensing fee did not exist or was more reasonable.

We believe that the consumers of this country can best be served with a low-cost decoding apparatus. This will happen only when one of two things occur. That is, the government sets a standard or there is a cooperative standard agreed upon between the cable industry, the program industry and the earth station industry. Under the auspices of the Congress and the Justice Department, I think such discussion could be had and could be fruitful. It would result in a uniform standard (perhaps the M/A-COM standard) which many manufacturers could build. The standard should apply throughout the television receiving industry, whether it be a cable subscriber, MDS, SMATV or a home earth station user to make low cost decoding available through volume sales. With respect to M/A-COM's present equipment it is imperative to get to a generation beyond the PC board, that is chip sets or low-cost modules that could be plugged into existing receivers as well as future receivers to make scrambling truly affordable. Reasonable licensing terms and conditions are essential and an important first step.

### CONCLUSION

There are two areas where government can help:

1. If scrambling is to occur now no company or competing segment of the communications industry should be positioned to achieve a hardware monopoly. Room should be left and encouragement given for the development of a final U.S. standard or combination of compatible standards. That standard should treat all viewers equally - - there is no sense in using a system like the present one where two or three times as many homes steal from the cable system as there are satellite homes!

2. The pressure put on programmers to deal only with cable must be relieved. Programmers are, understandably, interested in being cable friendly but they are now being forced to not only be cable friendly but to be TVRO hostile! They should be taken off the hook and strongly encouraged to work with all packagers be they cable or earth

station. If this is not done, rural America will suffer most and will wind up subsidizing cable.

Finally, we are at the very beginning of the greatest communications revolution ever to happen. It may be like 1776 if we do it right. If we don't do it right, citizens will pay for generations. Since the stakes are so high and every American taxpayer/consumer is involved it may well be that government should be involved in setting standards and keeping the playing field level until our free enterprise system is truly ready to do the right thing.

**TESTIMONY OF RICHARD L. BROWN BEFORE THE SUBCOMMITTEE ON  
TELECOMMUNICATIONS, CONSUMER PROTECTION & FINANCE, ENERGY  
AND COMMERCE COMMITTEE**

**March 6, 1986**

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## INTRODUCTION

Mr. Chairman, Members of the Subcommittee, I am counsel to SPACE, the Satellite Television Industry Association, Inc. It is a pleasure to be here this morning and we appreciate very much the opportunity to testify. SPACE is the trade association representing the retailers, distributors and manufacturers of home satellite earth stations. SPACE's membership also includes individual owners and users of satellite earth stations. Its membership comes from all of the 50 states and from many foreign countries.

This industry, in six short years, has evolved from individual hobbyists and entrepreneurs into an over billion dollar-a-year, largely American business. It has become a major factor in the information and entertainment distribution marketplace, particularly to rural America, and an important provider of jobs throughout the United States.

SPACE welcomes the interest of the Subcommittee on the issue of ensuring that the nearly two million American families who view their television by means of a home satellite antenna are guaranteed continued access to programming. There are many different aspects to this issue. My written testimony today will focus primarily upon the following issues: access to the satellite transmissions of the major commercial television broadcast networks; access to the major non-network broadcast stations available via satellite ("the superstations"); and access to satellite transmissions using the higher frequency band (Ku-Band), which many believe represents the future of home satellite communications. Before addressing these issues, I wish to put them in perspective and provide a brief history of the home satellite earth station industry.

## BACKGROUND

The advent of commercial television in the late 1940s produced much excitement and promise. In the few major cities that had television stations, the lucky individuals who owned television receivers were the center of neighborhood attention. People

dropped by to view pictures that somehow magically appeared in one's livingroom. Television also came into smaller markets, so that by the end of the decade of the 1950s most metropolitan areas had some amount of television. Many rural areas did not.

The broadcasting system depended on advertising -- both national and local -- and thus, on obtaining a large number of viewers. Of economic necessity, the American broadcasting system focuses on serving the large population centers. But, concern was always expressed for the rest of America. There were all kinds of plans: to have a few major stations with wide broadcasting areas; to have transmitters on airplanes to cover wide areas; and, to have a widespread UHF television service. The latest has been the plan for low power television to bring additional service, particularly to rural areas.

As we look at the present facts of life, after almost 40 years of television, the Communications Act's goal of making "available, so far as possible, to all the people . . . an efficient, nationwide . . . service" still is not a reality. If you do not live in a major population center, you are shortchanged. The smaller the community, generally speaking, the less it has.

Shortly after the development of over-the-air broadcasting, came the first cable television systems. Beginning with systems with just a single channel, some modern cable systems now offer over 50 channels. There are approximately 36 million cable television subscribers today. Most of the newer cable subscribers are obtaining, via satellite, a wide variety of programming, much of which has not been previously available.

Major growth in the number of conventional over-the-air television stations is not predicted. Other technologies such as low power television, multipoint distribution service (MDS) and subscription television (STV) do not offer the same viewing opportunities as the multi-channel capability of cable. The history of MDS and STV replicates that of broadcasting and cable: they thrive on dense populations. Although cable service has expanded dramatically over the years, in recent years growth has been flat and for many Americans cable is not a realistic alternative.

Large segments of America may never have cable. Cable started and enjoyed most of its early prominence largely in smaller towns, but drive a short distance outside these towns and there will be no cable. Cable thrives on population density and abhors distances. Where there are less than 30 dwellings per mile, there often is little cable — and probably never will be. It simply is not economical to supply such areas, and rural Americans were treated as second class citizens as far as communications is concerned.

But a real possibility for a different kind of future for Americans who could not enjoy cable emerged in late 1979 and early 1980. All Americans having no television or access to only one, two or three network stations, through earth stations, began to receive, among others:

- o 24-hours a day news;
- o Coverage of the U.S. Congress;
- o Network and independent television stations;
- o Religious stations;
- o Children's channels;
- o Women's programming;
- o Minority programming — for blacks and Hispanics;
- o 24-hours a day sports;
- o Other sports channels;
- o 24-hours a day feature films;
- o Cultural channels.

Ten years ago, a satellite earth station installation cost \$100,000. Today it is possible to buy a 6-foot, fixed-position satellite receiving system, which will produce good pictures in some areas on Galaxy I for well under \$1,000. Consumer prices for satellite antennas that tune all domestic satellites, range from \$1,000 to \$3,000. Mid-price units today produce better quality pictures than the best available ten years ago. For the first time, rural Americans can have access to the same or more sources of information and entertainment than city or suburban dwellers.



## Satellite Television - Growth in Spite of Adversity

From the birth of this industry, only six years ago to the present, there have been those who wished it did not exist. For the first four or five years the program suppliers called us "pirates." They tried to stop the growth of this industry. Despite the fact that earth stations were used to view satellite services which welcomed viewing by dish owners, threatening letters were sent to manufacturers, dealers and owners of the equipment by major programming networks. Many earth station owners sent checks to those services which they viewed only to have those checks returned with letters warning that viewing their television channel was against the law. A major cable television company went so far as to sue a retailer of home earth stations alleging that the sale and use of this equipment violated state and federal law. However, a federal district court judge found on all counts for the home satellite antenna retailer in AirCapital Cablevision, Inc. v. Starlink Communications Group, 601 F. Supp. 1568 (D. Kan. 1985).

From 1979 to 1984 there were four legislative efforts in the United States Congress directed at "signal piracy." Because of their sweeping terms, these efforts, if successful, would have put the satellite earth station industry out of business. On each occasion rural Americans, along with others concerned with the expansion of technology and service worked with the Congress to ensure that earth stations would not be adversely affected.

Finally, in 1984, the legality of home earth stations was clarified by the United States Congress. Through the satellite viewing rights provisions contained in Section 705 of the Cable Communications Policy Act, it was made clear that the manufacture, sale and use of home satellite earth stations and the viewing of unscrambled satellite programming was legal. Compensation to programmers was assured, provided they either encrypted their service or engaged in a marketing plan for unscrambled services which resulted from fair and open marketplace negotiations. At the same time, substantial additional penalties were provided for theft of cable television service, as well as commercial violations of Section 705 of the Communications Act.

From the very beginning of this industry's existence, up to the present time, our industry's position has been consistent. Again, SPACE does not oppose the efforts of satellite programmers to encrypt their programming in order that they may receive fair compensation for it. But programmers should have freedom of choice based purely on their own independent judgment. We do oppose the cable industry's threats to make programmers scramble.

### Encryption and Access

Some satellite services, principally those which depend for their revenue, in whole or in part, upon payment of a direct fee, are encrypting or intend to encrypt their signals in the near future. SPACE is sensitive to the legitimate concerns of the subscription programming services that they be paid a fee for the viewing of their services. While most program networks will provide access once they scramble, there still exists a significant problem with superstations and television broadcast networks. My testimony here deals with the question of access, itself, not the terms and conditions under which it is provided. If these networks are able to deny service to satellite earth station consumers, a dangerous precedent will be set. We steadfastly support a moratorium as suggested in H.R. 1769 to ensure access to all television signals before they are scrambled. To allow the dangerous precedent of scrambling without access may have an adverse effect on future delivery of programming to the home on other frequency bands such as Ku-Band.

### THE NETWORKS

Today millions of Americans simply cannot view the transmissions of the commercial television networks unless they use a satellite antenna. These Americans are usually located in rural America. They cannot view a "local" affiliate because there is none or its signal is blocked by terrain factors, atmospheric conditions or man-made obstacles. Absent satellite television, they are denied what the rest of us take for granted. By means of a satellite antenna, they are able to view CBS and other television

network feeds, complete with network commercials. The feeds they view are identical to the feeds the local affiliates retransmit (where there are local affiliates) absent only the locally inserted material and commercials.

CBS intends to scramble its satellite-delivered signals and not make any of them available to home satellite earth station users, no matter where they are located, and no matter what the circumstances.

We ask, does CBS have an obligation to serve every potential viewer in its service area, no matter what kind of antenna is used? Does it matter that someone blocked by mountains cannot view the local CBS affiliate, and instead utilizes an earth station? Does it matter that someone outside the range of the local affiliate views the parent network's transmissions from the sky? CBS, a network which has been at the forefront in defending, against all challenges, its right to speak to the American public is now denying the right of millions of Americans to view and listen.

CBS defends its decision to cut off service to hundreds of thousands of homes by stating that it has created a "task force" to look into how to get CBS service to these locations. We are pleased that the development of home satellite earth station technology has finally caused CBS to recognize that as a broadcast network, it has an obligation to provide its programming to all Americans. However, it is highly unlikely that any significant percentage of the one million plus viewers currently unable to view CBS via means of a local affiliate will be able to do so at any time in the near future, CBS' "task force" notwithstanding. CBS has known for years that not all Americans were able to receive its signals. Translators have not, will not and cannot fill that void. Translators have been around for more than a quarter of a century, yet service is still not universal. However, satellite home earth stations are, today, doing the job.

CBS has expressed concern that home viewing of its network feeds threatens to undermine its relationship with its local affiliates. This fear is misplaced. Home satellite earth station owners who reside within areas where a quality network affiliate



signal can be received do view that network affiliate. This is due to the fact that, in addition to the network programming, such affiliates also provide other local programming. CBS affiliates have taken great pride in the provision of local service, such as news and public affairs. In short, there is no evidence that home satellite earth station owners residing in the area of local broadcast affiliates routinely view the network feeds rather than the services of those local affiliates. In any event, there is no evidence of any material adverse impact by any viewing of satellite feeds within local service areas of broadcast stations.

CBS has claimed that its network feeds are akin to private telephone calls. But most telephone calls are not intended for ultimate distribution to the public nor easily receivable. CBS' network feeds are destined for viewing by the public with local commercials and other programming only added. CBS, as one of the major television networks, occupies a unique place in American life. It has benefitted from the use of the public spectrum to transmit its network programming to its affiliates. In utilizing satellite technology CBS has lowered its operating costs over what they would otherwise have been. In moving to satellite transmissions, CBS has occupied a portion of the nation's limited spectrum, thus denying the use of that spectrum to others. Additionally, CBS' use of satellites has been, and is continuing to be, directly subsidized by the taxpayer \*/. Rural taxpayers should not be deprived of the benefits of their own investments. CBS or any other network should not scramble its finished network feeds unless Americans who cannot view these networks are given an opportunity to continue to do so by satellite. In this regard, we have not requested that the news gathering and similar feeds that the networks utilize remain unscrambled.

\*/ In 1961 it was NASA's policy to recover incremental "out-of-pocket" launch costs. This later was changed to recovery of "all reasonable costs." As late as last year, NASA reported to Congress that it had been reimbursed for only 24% of its shuttle flight expenses.

By scrambling its feeds to affiliates, while refusing to provide access, CBS is terminating service to millions of Americans without any rational or logical justification.

### THE SUPERSTATIONS

Beginning in the mid-1970s entrepreneurs began transmitting various local television broadcast stations from their original markets up to a satellite and distributing the programming throughout the United States to cable television systems. Almost overnight Ted Turner's Channel 17 (WTBS) was transformed from a small, struggling UHF station into a major force in communications with some 35 million subscribers. WTBS has been followed on the satellite by WOR-TV (Channel 9), New York; WPIX-TV, New York; WGN-TV, Chicago; and others. As a result, cable television viewers whose systems carry the superstations can now view a greater abundance of information and ideas. Home earth station owners are also able to view these transmissions.

Most of the common carrier services transmitting these signals have indicated they intend to scramble the superstation signals. WOR-TV is transmitted by Eastern Microwave, Inc. Eastern pays no compensation to either WOR-TV or to the copyright holders from whom WOR-TV obtains programming. Eastern does impose transmission fees on cable television companies which range, depending on volume, from one cent to ten cents per subscriber per month according to its FCC tariff. There is no charge for cable subscribers in excess of 750,000 per company.

In Eastern's own words, "[I]n response to the cable industry's desire for scrambling of programming services. . ." it has responded to the pressure of the cable television industry to scramble its transmission of WOR-TV. It has also failed to amend its tariff to permit reception of those signals by home satellite earth station owners. A reason given by some carriers for this refusal is that under copyright law they may only transmit broadcast stations to cable television systems without potentially infringing the copyrights in the programming.



We do not believe that the copyright law can fairly be construed so as to deny home satellite earth station owners the same programming available to cable television viewers. Individual home earth station owners who view satellite programming in their home do not engage in an activity prohibited by the Copyright Act, because there is no public performance. So long as Eastern Microwave's home earth station customers are not copyright infringers, we do not believe Eastern Microwave can be found to have engaged in copyright infringement. Another argument is that the very act of scrambling its signal might make a carrier a copyright infringer. Whatever uncertainty exists should be resolved before the superstations are scrambled, and not used as an excuse to deny service to millions of Americans. It is clear that Eastern is scrambling because cable wants it to. That simply is not enough. Our industry is committed to solving whatever problem may exist if carriers believe that a legislative solution is needed. To scramble first is to put the proverbial cart before the horse.

#### THE FUTURE OF EARTH STATION RECEPTION

HBO, Cinemax, Showtime, The Movie Channel and the other major subscription and basic services are now scrambling, or intend to scramble, their transmissions. Up until passage of the Satellite Viewing Rights provisions (Section 705(b)) contained in last year's Satellite Cable Communications Policy Act, these services took the position of refusing to deal with home satellite earth station owners. They refused offers of compensation from home owners for the viewing of such programming.

These services are representing to you that the situation has now changed. HBO and Cinemax are scrambled and they have announced a mechanism by which home satellite earth station owners may obtain access (albeit on terms and conditions with which we disagree). However, there are strong indications that this access "solution" is only a temporary one.

HBO's transmissions as well as those of many other satellite programmers are gradually migrating from the C-Band (4/6 GHz) commonly in use today to the Ku-Band



(12 GHz utilizing smaller diameter antennas). HBO and RCA, for example, have announced an agreement to form a joint venture to purchase their own Ku-Band satellite for launch in 1988. Prior to the availability of this satellite, both HBO and Cinemax will be available on another Ku-Band satellite but only to cable television systems. The supposed reason for the use of these Ku-Band satellites is that it enables cable operators to use smaller diameter and less costly reception equipment and it substantially reduces interference problems caused by terrestrial microwave transmissions. Similarly Ku-Band transmissions will present advantages for home earth station owners also, particularly in more urban environments.

Nowhere in its decision to migrate to Ku-Band are the interests of home satellite earth station owners rights considered. In fact, HBO is quite clear. Ku-Band transmissions will be denied to home owners. Joe Collins, HBO President, stated:

Unlike HBO C-Band transmissions, Ku-Band transmissions of HBO and Cinemax will be scrambled from their onset and are intended to be received only by cable affiliates . . . 'Since our Ku-Band signals will be encoded and there is no installed base of consumer equipment to receive Ku-Band transmissions, HBO currently plans to offer its services to home TVRO owners only through C-Band satellites. . . .'

C-Band satellites have a future useful life of about five to ten years. At that rate, today's C-Band satellite transmissions will soon cease. As satellite subscription services begin to migrate from C-Band to Ku-Band, that migration might well be accompanied by service termination to home satellite antenna owners by companies such as HBO. There is no rational business reason for this service termination except protection of cable revenues. To permit that plan to take effect is to deny the benefits of satellite television so recently recognized by the Congress. That plan cannot be allowed to become a reality. The bills before you creating rights of access (H.R. 1840 and 3989) are critical to the future ability of Americans to receive satellite communications. Clearly, a moratorium (H.R. 1769) is necessary to ensure access.

## CONCLUSION

The expansion of home satellite earth stations is making universal television programming of choice a reality for nearly all Americans. Continued access to network, independent and other programming, is essential to continued development of satellite to home communications.

Home satellite earth stations are also bringing competition to the marketplace. Seeing this growing competition, the newly deregulated cable television industry is doing what it can to ensure that if it cannot stop technology, it can, at least, control it through manipulation of programming services. The challenge for Congress will be to ensure that the newly unleashed cable industry is not permitted to unfairly control its newest, and in many cases its only, competition. For, without meaningful competition in the provision of satellite communications services to the home, the consumer will suffer through inflated costs and reduced service. Such a result cannot possibly serve the public interest.